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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,810	09/22/2003	Jurgen Stohrer	STOHRER ET AL-3	2169

25889 7590 10/27/2005

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EXAMINER	
CHANG, CELIA C	

ART UNIT	PAPER NUMBER
1625	

DATE MAILED: 10/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/667,810	STOHRER ET AL.	
	Examiner	Art Unit	
	Celia Chang	1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *27 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Response filed by applicants dated July 27, 2005 has been entered and considered carefully. Claims 1-20 are pending.

Applicants' argument with respect to the restriction is unpersuasive because the restriction has been made final. Applicants provided mere argument without *factual* evidence that the TEMPO analog can be anything more than the seven compounds explicitly delineated for group I in the restriction action dated Nov. 23, 2004. Please note that not only the term TEMPO is known in the art to be one compound (see CA 2564-83-2) it is explicitly disclosed in the specification that the term TEMPO is 2,2,6,6-tetramethylpiperidine-1-oxy (see p. 2). Therefore, there is no ambiguity that the restriction was for the seven compounds explicitly named in the office action for group I (see office action dated Nov. 23, 2004).

It is not clear what is the argument. Is it that the claims as originally filed and restricted, does or does not include the compounds of US2004/0063932 or not. The claim 1 as originally filed under the scope of "nitroxy compound" would read on the compound of US 2004/0063932. If applicants argued that applicants have amended the claims to avoid the art, then, such evidence is supportive of the propriety of the restriction because every catalyst must be evaluated on its own merit i.e. patentably distinct.

2. Applicant's arguments with respect to claims 1-20, limited to catalyst of TEMPO, 4-hydroxy- TEMPO, 4-oxo- TEMPO, 4-amino- TEMPO, 4-acetamido- TEMPO, 4-benzoyloxy-TEMPO, 4-acetoxy- TEMPO, in a two phase reaction, have been considered but are moot in view of the new ground(s) of rejection.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-20, limited to catalyst of TEMPO, 4-hydroxy- TEMPO, 4-oxo- TEMPO, 4-amino- TEMPO, 4-acetamido- TEMPO, 4-benzoyloxy- TEMPO, 4-acetoxy- TEMPO, in a two phase reaction are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. US 6,127,573 in view of Anelli et al. (1449), de Nooy et al. Ca 123:340678, Harbeson et al. CA 122:133766, Brochett et al. CA 132:152042, Thaburet et al. Ca 134:281053 or Merbouh et al. US 6,498,269 and Fritz et al. US 6,750,371 (please note no certified translation of the priority document was filed, thus, Fritz is prior art).

Determination of the scope and content of the prior art (MPEP §2141.01)

Li et al. '573 generically disclosed the instant claims, see formula I and II, R1 is C2-C8alkynyl col. 1 line 65 or substituted alkynyl col. 2, lines 4-9) i.e. alkynyl alcohol to alkynyl carboxylic acid using buffer of pH4-8 (col. 4, lines 22-24), TEMPO, Hypochlorite, temperature between 0-50°C, biphasic reaction (see col. 2-4) and a species of alkynyl is disclosed on col. 7-8 second to the last compound from bottom i.e. all the limitations of the base claim and dependent claims.

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

The difference between the claim and the prior art is that the instant claims are drawn to continuous process and pH greater than 7 while the prior art did not explicitly disclosed a continuous process and the preferred pH is 6.5-7. Per ponderous of evidence are found in the art that for a TEMPO/hypohalite oxidative reactions, the pH of reaction environment is generally "basic" and a biphasic system employing a phase transfer catalyst is desirable (see Merbouth et al. '269, col. 4, lines 33-36, col. 7, lines 53-57). Please note that just because for certain starting material the yield is low does not negate that basic condition is an optimal pH for operation. In addition, it is known in the art that for a known batch process changing only into a continuous process is prima facie In re Fong 154 USPQ 25, In re Kronig 190 USPQ 425, In re Dillon 13 USPQ2nd 1337. In the instant case, not only such decision applies, the US 6,750,371 evidenced that such conversion indeed is operable (see claim 1, col. 9).

Finding of prima facie obviousness—rational and motivation (MPEP§2142-2143)

One having ordinary skill in the art would be motivated to operate the generic process disclosed by Li et al. '573 with specific compounds of the claims i.e. 2-propyn-1ol or 2-butyne-

1,4-diol since analogous compounds have been exemplified by Li to be operable and the general pH has been guided to be basic (see col. 10 lines 52-65), a phase transfer catalyst is desirable, and operability for conversion to continuous operation has been taught. The changing of parameters using conventional guidelines proven operable in analogous art so that optimal yield can be obtained is an effect oriented modification prima facie obvious to one in the chemical art. In re Szumski 133 USPQ 551. In absence of unexpected result, there is nothing unobvious of operating the Li process for the alkynes disclosed by Li modifying the process with conventional operable parameter proven optimum in the art and expect optimum yield of the process.

4. Claims 1-20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/365,887 in view of Li et al. '573, Merbouh et al. US 6,498,269 and Fritz et al. US 6,750,371.

Determination of the scope and content of the prior art (MPEP §2141.01)

The copending claims in SN 10/365,887 is drawn to more specific quantity of the reactant which are fully encompassed by the instant claims.

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

The difference between the copending claims and the instant claims is that the copending claims are limited to pH less than 7, while the instant claims are pH is greater than 7. In addition, dependent claims of the instant included the more specific species and phase transfer catalyst and continuous operation.

Finding of prima facie obviousness---rational and motivation (MPEP§2142-2143)

One having ordinary skill in the art would find the instant claims prima facie over the copending claims since the claims incorporated all the elements of the copending claims with modification well recognized in the analogous art being obvious modification for such process see Li et al. '573 pH ranges from 4-8.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Celia Chang whose telephone number is 571-272-0679. The examiner can normally be reached on Monday through Thursday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang, can be reached on 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

OACS/Chang
Oct. 25, 2005

Celia Chang
Primary Examiner
Art Unit 1625